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Signatures maintained on controlled copy in CAD QA office.

1.0 Purpose

To provide the essential requirements of a process control system.

2.0 Scope

The requirements of this document apply to manufacturing, construction, installation, operations and monitoring activities performed at AGS and, when appropriate, to AGS's suppliers.

3.0 Policy

- 3.1 It is the responsibility of the cognizant engineer or scientist (CE/CS) to establish controls that will ensure that only acceptable items/processes are utilized.
- 3.2 When deemed appropriate by the CE/CS, written procedures will be prepared for processes where quality cannot be determined by inspection and test alone (i.e., welding, heat treating, plating, bonding, etc.), and unique, critical, major, complex or repetitive processes.
- 3.3 Procedures, personnel, or equipment necessary for the performance or verification of the process shall be qualified to applicable criteria.

4.0 Procedure

- 4.1 The CE/CS is responsible for determining which process procedures are required for item(s) that are to be fabricated, manufactured, constructed, installed, reworked, repaired, maintained, or modified by either a supplier or BNL. Procedures shall be generated where the absence of such documents would adversely affect quality.
- 4.2 The CE/CS will prepare, or have an individual or supplier, competent in the performance of the specific process, prepare the necessary procedures. Process documentation shall include as appropriate:
 - 4.2.1 The sequence and descriptions of all operations.
 - 4.2.2 Equipment requirements, including processing and monitoring equipment.
 - 4.2.3 Instructions pertaining to age sensitive material handling, storage and control.
 - 4.2.4 Environmental, cleanliness & safety factors.
 - 4.2.5 Codes, standards or specifications as applicable, and, if none are applicable, the extent to which the criticality of the item or process requires special process controls. Items that are governed by codes, specifications, drawings, or purchase orders that require specific methods of identification shall be identified in a manner that conforms with the requirements.

Such identification shall be verified upon receipt at BNL, or during manufacture at BNL. The methods of identification used shall be clear and legible, and shall not adversely affect the functional quality of the item.

- 4.2.6 Methods and frequency of qualification/certification of equipment, personnel, or process.
- 4.2.7 Specific inspection and test points including methods and frequency and how inspection and test status will be indicated, on the item itself, or on the documentation traceable to the item. The degree of inspection/test traceability shall be determined by the CE/CS.
- 4.2.8 Criteria for acceptable performance/parameters which shall be stipulated, to the greatest practical extent, in documented standards or by means of representative sample.
- 4.2.9 Requirements for travellers and/or data records which demonstrate performance.
- 4.3 Process documentation, shall be uniquely identified, and shall contain the latest revision designation and the signatures of the personnel who prepared and approved the documentation.
- 4.4 Certification, qualification, and personnel training shall be specified by the CE/CS in concurrence with the appropriate AGS safety committees.
- 4.5 The CE/CS is responsible for assuring that the procedures and qualifications are completed prior to the time the processes are to be performed, and for assuring that processes are performed and verified in accordance with the requirements of the written procedures. The CE/CS shall maintain records of the certification or qualification of equipment and processes, as required by the process documentation.
- 4.7 Personnel verifying process performance shall record results in accordance with the instructions of the applicable procedures.
- 4.8 The CE/CS shall be responsible for determining and documenting the root cause of nonconformances or unsatisfactory conditions resulting from a process, and for taking appropriate corrective actions.
 - 4.8.1 Completed and partially completed items and assemblies which have been fabricated or manufactured at BNL, and have been rejected, or determined to be nonconforming will be clearly identified as such. This identification shall be affixed to the item, or shall appear on documentation directly traceable to the item.